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MEMOIR concerning The GEOGRAPHY
of the
COUNTRIES situated on RIO DE LA PLATA,
and on the
RIVERS FALLING INTO IT :

by

Palrymple,

1807.

Printed by BALLINTINE & LAW, N^o. 9, Duke-street,
Adelphi, Strand. 1807.

And Sold by F. WINGRAVE, in the Strand; Successor to Mr. Nourse.



DIRECTIONS
for
The MOUTH of RIO DE LA PLATA,
by the
Honourable *Duncombe Pleydell Bouverie,*
Captain of H. M. Ship Medusa ;
with
The ASTRONOMICAL OBSERVATIONS of
Capt. Beaufort, of H. M. Ship Woolwich,
and
Capt. Heywood, of H. M. Ship Polyphemus,
OBSERVATIONS by Dr. GORDON, Physician to the Army,
ABSTRACT of Capt. Heywood's Journal of H. M. Ship Polyphemus,
and
A Spanish Register of Winds and Weather at Buenos Ayres
in 1805.

Published by

Palrymple,

1808.

LONDON:

Printed by **BALLINTINE & LAW, N^o. 9, Duke-street, Adelphi, Strand. 1808.**

And Sold by **F. WINGRAVE, in the Strand ; Successor to Mr. NOURSE.**



In full Confidence

that

The *distinguished Merits*

of

A SON,

must afford the highest Satisfaction

to

A FATHER,

This *excellent Description of the Mouth*

of

RIO DE LA PLATA,

by

The Honourable *Duncombe Pleydell Bouverie*,

Captain of His Majesty's Ship Medusa,

is inscribed to

Jacob Pleydell-Bouverie, Earl of Radnor,

by

7th May, 1807.

Calrymple.

(2)

MEMOIR concerning the GEOGRAPHY
of
The Countries situated on The Rio de la Plata,
and
The many Rivers falling into it.

8th June, 1807.

THE Materials consulted for this purpose are :

N^o 1. The *Spanish Chart* of *Rio de la Plata*, published by the *Spanish Depot*, said to be from *Malespina's Voyage* ; The *English Navigators* represent the *Coast* as very *exactly delineated*, and there can be no doubt of the precision of the *Spanish Astronomical Observations* at *M^{te}. Video* : The *Soundings* in this *Chart* have not been found equally consonant to observation : but Those of *English Navigators* do not agree with each other : *Soundings*, out of sight of *Land*, cannot be exactly ascertained by any way but the *Quincunx*.

9th June.

N^o 2. There is in the *Hydrographical Office*, ADMIRALTY, a *Map* of the *Jesuit Missions*, by *F. Joseph Quiroga*, of the *Society of Jesus*, in the *Province of Paraguay*, in 1749 ; and published at *Rome* in 1753. On one *Margin* of this *Map*, is an *Account* of several *Indian Nations* ; on the other *Margin*, a *Table* of *Latitudes* and *Longitudes* : The *West Side*

Side of Ferro was the 1st *Meridian* in this *Map*; It was appointed the *French First Meridian* by Law, and used by *D'Anville*, in all his *Foreign Maps*. *Quiroga's Map* places *M^{te}. Video* in $323^{\circ}. 24' E = 36^{\circ}. 36' W$ Longitude from *West Side of Ferro*, determined by *Feuillé* to be in $19^{\circ}. 51'. 33'' W$ from Paris, or $17^{\circ}. 31'. 33'' W$ from *Greenwich*;

<i>M^{te}. Video</i> , by <i>Quiroga</i> , 'therefore will be in	W from Greenwich. 54°. 7'. 33"
But being, by the recent Spanish Observa-	} = 56. 14. 15
tions in . 49°. 57'. 15" from Cadiz,	
which being 6. 17. 0 W fr. Greenwich,	
By <i>Quiroga</i> , too far E	. 2. 6. 42

It is remarkable, that *Juan Texeira de Albornoz*, in his *Map* of 1679, had abated $1^{\circ}. 30'$, in the Longitude from *S^a. Antonio* to Cape *S. Mary*, from an antecedent Chart in 1629, so that the ancient *Charts* were less defective, than the *subsequent*.

The Difference of *Longitude* between *M^{te}. Video* and *Buenos Ayres*.

		Difference from Spanish Observations.
The Spanish Observations by Chronometer	$2^{\circ}. 10'. 30'' W$	
<i>Quiroga's Longitudes</i> 1749	2. 21. 0 - 10'. 30" too far W	
<i>Dobrizhoffer</i> . . . 1784 <i>Map</i>	1. 17. 0 - 53. 30 too far E	
	Long. in Book 1. 43. 0 - 27. 30 too far E	
<i>Juan de la Cruz Caño's Map</i> , 1775	2. 18. 0 - 7. 30 too far W	
<i>Arrowsmith's Map</i> 1806	2. 7. 0 - 3. 30 too far E	
<i>D'Anville's Map</i> 1733	1. 58. 0 - 12. 30 too far E	
1748	2. 30. 0 - 19. 30 too far W	

I think the *Table*, of *Latitudes* and *Longitudes*, on the *Margin* of *Quiroga's Map*, merits some confidence, because it is said " In this *Table*, the
" *Latitude*

" *Latitude and Longitude is not marked, of the*
 " *Towns, newly founded in the Country of the*
 " *Tobatines, Minuanes, Mocovies, and Abipones,*
 " *for the necessary Observations have not been*
 " *made in them,"* which implies that the *necessary*
Observations, had been made at those Places,
whose Latitudes and Longitudes are given, on the
Margin of the Map: although there is no in-
 timation *when, by whom, or how* those *Latitudes*
and Longitudes were obtained; but it may be in-
 ferred, from *Dobrizhoffer*, that those Positions were
 ascertained by the *Observations* of *Quiroga* him-
 self, whom he represents to have been an *excellent*
Mathematician, and says, the Places which he had
 himself observed were to be depended upon:
Dobrizhoffer seems to have given the *Latitudes*
 and *Longitudes* of *Buenos Ayres, Corientes* and
Assumption from *Quiroga*, for they exactly agree,
 as they do in the *Latitude S^{ta}. Fé*, of which, The
Longitude is not given, by either; but He not only
 differs in the *Longitude* of *M^{te}. Video*, but he
 differs also 6' in the *Latitude*, making it $34^{\circ}. 48' S$,
 whereas *Quiroga's* *Latitude* $34^{\circ}. 55' S$ is only 12"
 more than $34^{\circ}. 54'. 48'' S$ determined by the
Astronomical Observations of the Spaniards: which
 may be considered as the same.

By the Foregoing Comparison it appears, that
Quiroga's Map, makes the difference of *Longitude*,
 between *M^{te}. Video* and *Buenos Ayres* $10'. 30''$
 more than the Spaniards do by *Chronometer*, and,
 consequently, that, if *Quiroga's* *Longitudes* are
 reckoned

reckoned from *Buenos Ayres*, instead of *M^{te}. Video*, they will be 10'. 30" less, from Greenwich, by the former than by the latter.

N^o 3. Another Spanish Map, of considerable importance, is inserted in P. *Lozano's* History of *Chaco*; it contains much detail, but the *Latitudes* and *Longitudes* are very incorrect.

N^o 4. The Map, in *Dobrizhoffer*, may be of use in the detail of some of the Rivers, but he calls "a *Geometrician* a *Rara Avis*," from whence we may infer he was not one, and his *Map* does not agree, with the *Latitudes* and *Longitudes*, which he has given in his Book; and consequently can be of little use in ascertaining *Positions*.

N^o 5. The Great Map of *South America*, by *Juan de la Cruz Caño y Olmedilla*, 1775, is of much value for the detail; but There is no reason to believe, it was determined by Astronomical Observations in this Quarter, and the Modern Experience proves it, in many places, to be very erroneous; especially in the Coast, to the Southward of the *Rio de la Plata*, although we have scarcely any thing else for the interior: It has been copied and published by Mr. Faden.* There is an Impression of the Original in the Secretary of State's Office, and Another

* I am informed Mr. Faden had not a Copy of the *Original*, but only an *oil-paper tracing*. It is not therefore to be wondered, the English Copy should not exactly agree with the Spanish Original.

Another in my Possession, sent me most liberally from *Spain*, with the concurrence of the Government, at a time when it was considered as a State Paper; and therefore I refused to make it instrumental in facilitating *Hostile Operations*.

Nº 6. Is the Map, published in 1806 by *Arrowsmith*, from a Spanish MS, made by the Commissioners, appointed to settle the Boundary, between the Spaniards and Portuguese; I have no doubt it very accurately describes the Eastern Boundary; but I question, whether the Western parts are determined with equal precision; for I saw the Original MS at the House of Sir Joseph Banks, and took notice that the Mouths of the *Rio de la Plata*, or more properly of the River *Parana* where it falls into the *Rio de la Plata*, were different on the Maps of different Scales: and I find it does not agree with the detailed description of *P. Lozano*.

Nº 7. Is a Tracing of Part of the *Original Survey* on a larger Scale.

Nº 8. }
9. } Are from M. *D'Anville*, who, in 1733, published a Map that first gave the World a tolerable Idea of this part of our Globe; It was published in the 21st Vol. of the *Lettres edifiantes et curieuses*, and accompanied an account of *Paraguay*, as It then was. M. *D'Anville* gave a Memoir explanatory of the Map, which I intend to reprint with a Translation; unless I should learn, that a complete Collection of M. *D'Anville's* Works is in serious contemplation of some other Person.

In 1748 M. *D'Anville* published his Great Map of *South America*, in three sheets, and gave two

Letters, elucidating its construction, in the *Journal des Sçavans* 1754. These I also intend to reprint.

In 1760 M. *D'Anville* published another *Map of Paraguay*, &c. said to be taken from his *Map of South America*, of which it seems to be an exact copy; I believe it was intended to accompany the French Translation of *Muratori*: It is very different from the Italian Edition of *Muratori*, which is a much inferior performance: M. *D'Anville* having had the advantage, in those He published, of the MSS of The Jesuits.

Nº 10. Is a Chart, of *Rio de la Plata*, published, in 1717, under the auspices of the *South Sea Company*; It has no Scale of *Latitude* or *Longitude*, but it contains the *Soundings* all the way up to *Sta. Fé*, which I never saw any-where else: It also contains a *Particular Plan* of the Bay of *Castillos*, on the *East Coast* to the *Northward* of Cape *Sa. Mary*: This Chart was published by Richard Mount, Tower-Hill; but the *Plate* no longer exists: nor even the memory that *such a Chart* ever had been published.

Nº 11. Is a Chart of *Rio de la Plata*, obviously originally *Spanish*, but engraved in *England*; It has no *Title*, but in a *Compartment* is a *Plan* of *Malonado*, taken on board the *St. Michael*, Capt. *Charles Burnham*, 1728, by W. S.

Nº 12. A *Spanish Map*, of the *Province* and *Coast* of *Buenos Ayres*, by Don *Juan de la Cruz*.

I know of no other Maps of this Part worth Notice.

Marquand's Map,
1733.

D'Anville's Map,
1748.

	So Longitude from Latitude. Video.	Reduced to Greenwich W Longitude.	So Latitude.	W Longitude from Mte. Video.	Reduced to Greenwich W Longitude.
M ^{te} . Video . . .	34° 5' 0'	56° 14'	34° 45' S	0° 0'	56° 14'
Buenos Ayres . .	34. 3 58 W	58. 12	34. 39	2. 30. 0'' W	58. 44
Colonia (de Sacr ^o)	34. 2 15	57. 29	34. 17. 30''	1. 50	58. 4
S ^{ta} . Fé . . .	31. 4 43	59. 57	31. 50	4. 50	61. 4
Yapeyú . . .	29. 3 27 E	55. 47	29. 45	0. 17	56. 31
Cruz . . .	29. 1 45	55. 29	29. 28	0. 7. 30	56. 21. 30''
S. Borja . . .	28. 4 20	54. 54	29. 5	0. 35. E	55. 39
S. Thomé . . .	28. 3 20	54. 54	28. 58	0. 34	55. 40
S ^t . Miguel . . .	28. 2 50	53. 24	28. 35	2. 30	53. 44
S. Lorenzo . . .	28. 2 47	53. 27	28. 40	2. 17	53. 57
S. Juan . . .	28. 2 3	53. 11	28. 30	2. 42	53. 32
S. Luis . . .	28. 2 31	53. 43	28. 43	1. 55	54. 19
S ^{ta} . Angel . . .	28. 2 2	53. 12	28. 15	2. 45	53. 29
S. Nicolas . . .	28. 2 16	53. 58	28. 30	1. 35	54. 39
Concepcion . . .	27. 2 46	54. 28	28. 29	1. 5	55. 9
Apostoles . . .	27. 2 32	54. 42	28. 28	0. 45	55. 29
S ^{ta} . Maria . . .	27. 2 7	54. 7	28. 20	1. 23	54. 51
S. Xavier . . .	27. 2 18	53. 56	28. 13	1. 32	54. 42
Martires . . .	27. 2 6	54. 8	28. 12	1. 15	54. 59
S. Carlos . . .	27. 2 7	55. 7	28. 25	0. 16	55. 58
Corrientes . . .	27. 2 58 W	58. 12	27. 55	3. 15 W	59. 29
S. Joseph . . .	27. 2 16 E	54. 58	28. 20	0. 30 E	55. 44
Candelaria . . .	27. 2 14	55. 0	28. 5	0. 25	55. 49
S ^{ta} . Anna . . .	27. 2 33	54. 41	28. 1	0. 45	55. 29
Loreto . . .	27. 2 33	54. 41	27. 50	0. 47	55. 27
S. Ygn ^o . miri . .	27. 2 44	54. 30	27. 45	1. 0	55. 14
Itapua . . .	27. 2 11	55. 3	27. 50	0. 22	55. 52
Corpus . . .	27. 2 14	54. 0	27. 29	1. 13	55. 1
Santiago . . .	27. 2 1 W	56. 15	28. 5	0. 50 W	57. 4
Trinidad . . .	27. 2 34 E	54. 40	27. 40	0. 45 E	55. 29
S. Cosme . . .	27. 2 24	54. 50	28. 5	0. 33	55. 41
Jesus . . .	27. 2 30	54. 44	27. 29	0. 38	55. 36
S ^t . Ygn ^o . guaz ^u . .	26. 2 21 W	56. 35	27. 30	1. 2 W	57. 16
S ^{ta} . Rosa . . .	26. 2 1	56. 15	27. 34	0. 42	56. 56
N ^a . S ^a . de Fé . .	26. 2 10	56. 24	27. 23	0. 52	57. 6
Assumpcion . .	25. 2 54	57. 8	25. 32	1. 34	57. 48

Don Juan de la Cruz Caño's Map.

Spanish Original.

Mr. Faden's Copy.

	Longitude from Mte. Video.	Reduced to Greenwich W Long.	S ^o Latitude.	Longitude from Mte. Video.	Reduced to Greenwich W Long.
Y	2°. 55'. 0" W	59°. 9'	29°. 0'	2°. 58' W	59°. 12'
3	0. 23. 30	56. 38	25. 10		
5	1. 13. 30 E	55. 1	24. 0	1. 20 E	54. 54
3	7. 18. 30 W	63. 32	18. 20	7. 13 W	63. 27
5	2. 10. 30	58. 25	16. 25	2. 10	58. 24
5	4. 15. 30	60. 30	15. 55	4. 13	60. 27
1	2. 59. 30	59. 14	19. 8	2. 55	59. 9
5	0. 30. 30	56. 45	15. 44	0. 27	56. 41

raguay," published at Vienna, 8°. 1784,

DIRECTIONS for the *mouth* of RIO DE LA PLATA,

By the Hon. Duncombe Pleydell Bouverie,

Captain of His Majesty's Ship *Medusa*.

IT has been generally believed that *fogs* were *frequent*, and indeed *constant*, but during the experience of a year, from September 1806 to the same month in the following year, I did not find that *thick weather* was at all frequent; *Hazy* it often was. The *weather* is remarkably *fine*, and the *climate* in the *highest degree healthy*. The *prevailing winds* are *Westerly* in the *winter*: and *NEasterly* in the *summer months*, blowing *strong* mostly in the *afternoons*, with *clear weather overhead* and *hazy* in the *horizon*. *SE* winds are not common, and generally bring *bad weather*. A *SW*, or *Southerly*, is always followed by *fine weather*, and is usually succeeded by an *Easterly* wind after a *short calm*. Should it be *foggy*, the *approach* to the *River* cannot be reckoned *dangerous*, if constant attention is paid to the *Lead* and the following directions.

I know of *no part* of the *River*, or *near it*, where there is danger of getting *on shoar* with proper attention to the *lead*, except that you must *not depend* upon it altogether in standing towards *Lobos* in the night.

Cape St. Mary is a *low point*, with *rocks* all about it: The *direction* of the *Coast*, to the *West* of it, becomes

B

more

more westerly, than at any other part *North* of the *Cape* : about 6 miles *North* of it, is a house with a row of *trees*, just to the *North* of the *house*, probably, a *fence* of *high Prickly Pear bushes*, which is *very remarkable*. About a mile *South* of the *house*, is a *bluff Point*, with a *few rocks*, at the *foot* of it, which is *remarkable*, as being *different* from the *rest* of the *Coast*, the *general character* of *which*, is a *sandy beach* ; One cannot fail of knowing the *Cape* by these *marks*, if you *run down* the *Coast* near it : if you are at any distance off, you will *not perceive them*. The *water* off *Cape St. Mary's* is *shoaler* than it is to the *Northward* of it. Off the *Cape*, in a *SE* direction, you have 8½ fathoms, at the distance of 4 or 5 miles ; to the *Northward*, between it and *Palma*, you have 10 and 11 fathoms at a very little distance from the *shoar*. Ships, in general, make the land with *North* and *NE* winds ; therefore, it is best to keep in the *Cape's Latitude*, or *something* to the *Northward* of it, till you get *soundings*, as the *Current* sets to the *SW*. It is better *not* to *make* the *land* *North* of the *Cape*, *not* that I believe there is any *absolute danger*, but the *water* in many places is *shoal* a *long way* off the *Land*, and would alarm any one not acquainted with that circumstance.

In Lat. 53°. 27' S, Long. 52°. 9' W, is a *shoal*, where we found only 9 fathoms water : I believe it is a *ridge* running in that *parallel* of *Latitude*, all the way to the *shoar*.

In

In Lat. 34° S, is some tolerably high Land, on which is a Spanish Fortress, called *Fort Teresa*: It is a square, with bastions at the *Angles*, it has three guns in the faces, and one in the flank, and stands about a mile from the Beach. About 6 leagues NNE from It is a mark set up, as the termination of the Spanish Territories.

Being in the Latitude of *Cape St. Mary* and got ground, in 28 or 30 fathoms fine sand and shells, you may reckon yourself, about 20 leagues off shoar: With from 15 to 20 fathoms sand and clay mixed, you are not far off the Land. When you have not seen the Land before night, be sure to keep to the Northward of the Cape by your dead reckoning, to allow for the Current, which sets to the Southward: This is the case with the above mentioned general North and NE winds. With South and SW winds, the Current runs strong, the other way.

From the parallel of *Cape St. Mary* in the night time steer SSW, till you get into the Latitude of *Lobos*, which you will know, by having soft mud: and if in steering this course you are set to the Westward, you will deepen your water to 20 fathoms: if to the Southward, you will continue in 16.

In the parallel of the *English Bank*, even so far to the Eastward as the meridian of *Cape St. Mary*, you have 12, 11, and 10 fathoms only, sandy bottom.

There

There is a *good passage* between *Lobos* and the *Main*. About a league to the Southward of *Lobos*, you have 18 to 22 fathoms *soft mud*: thence, running to the Southward, the Depth *decreases*.

By keeping in *not less* than 18, you ensure being to the *Southward* of *Lobos*.

From *Lobos*, you may run quite up to *Monte Video*, either by night or day, by making a due *West* Course; *first trying* the *Current*, to make *due allowance* for it.*

From *Lobos* to *Flores*, the course is N 86°.‡ W, 49 miles; and you will have, from 17 fathoms near *Lobos* to 7 fathoms near *Flores*: *Soft clay* is a *proof* of your *being in* the *channel*, which is a *general*, and *almost certain*, *guide* in every part of the *River*: and seems to be thus to be accounted for: that the *Current* of the *River*, which is often very strong, and strongest, of course, over the *shallowest* parts, washes the *particles* of *earth*, which float in the water, and are brought down with the stream, off the *shallow parts*, which are all of *hard sand*, and the *earthy particles*, of course, *subside* in the *deep water*, and where it is stillest, which is probably the reason why the *Harbour* of *Monte Video* is filling up so very rapidly.

Sand

* The *Currents* are so *irregular*, This will not always be possible. D

Sand mixed with small stones and shells is the proof of your being in the parallel of the English Bank: and fine brown sand with mud, or clay, is the proof of your being to the Southward of the English Bank.

Flores^a cannot be seen from a Frigate's deck more than 5 leagues: It consists of *two hummocks*, the *Southernmost* of which is 56 feet *above the surface of the water*: they are joined by a *low ground*, over which the *Sea* washes in *bad weather*. The *Island* extends itself in a NEbE and SWbW direction; and on either side you have *good anchorage and shelter*, according to the wind: Off the North end a reef stretches out in a NW direction. To the SW of the South part, the *Raisonnable* touched on a *rock*, and was aground on it for 10 minutes, about $\frac{1}{3}$ of a mile off; but I have *not the bearings*. It is, as well as *Lobos*, the *habitation* of *innumerable seals*, and *sea fowl*, who begin laying their eggs in August. When you are near *Flores*, the *depth* is the *same* to the *Northward*, as to the *Southward*, but the *bottom* is *firmer* to the *Northward*: *soft bottom*, as mentioned above, is the *proof* of your being in the *fair way*.

From between the *English bank* and *Flores*, make good a WbN $\frac{1}{2}$ N course 7 or 8 leagues till you are abreast of the *Harbour of Monte Video*: you may pass *Point Brava* in 4 $\frac{1}{2}$ or 5 fathoms, quite near the *Rocks*, if necessary. There is only 15 feet at *low water*, and

18 at

^a Vide Capt. Beaufort's *Plan* of these *Islands*. *D*

18 at *high water*, in the *Harbour*; but the bottom is so *very soft*, that *no danger* occurs to the ships, by lying *aground*: A SSW *wind*, which blows right into the *Harbour*, and causes a *good deal* of *sea*, always occasions the *water* to rise a *fathom*, or more.

In a long continuance of fine weather, the *tides* sometimes assume the appearance of *regularity*: but *this* is *not often* the case. They are governed entirely by the *winds*: The winds from the *Southward* cause the *water* to *run out* on the *North shoar* the strongest. *Fine weather* and NW wind make the *lowest water*. It is usual in *Monte Video Harbour* to have an anchor to the SE, and another to the SW, and to take *one* in abaft, from the Northward, for the *water forced in* by the *Southerly wind* sometimes *rushes out* with an *astonishing rapidity*; when the anchor to the North is of the greatest service.

If you have occasion to anchor near *Lobos*, you may do so, in *holding ground*, in 14 fathoms about 1'½ North of it.

The west part of the <i>Island</i> bearing	SbW½W
The extreme of the <i>rocks</i> to the Eastward bearing	SbE½E

To

To Anchor in MALDONADO.

The *Spanish Surveys* of this Bay, lay down a *sufficient depth* of water for any Ship, between every part of the *Island*, and the *Main*, however it cannot be safely entered, but by small vessels, except from the Westward, and you must not go further in than to bring the NW Point of *Gorriti* to bear SSW $\frac{1}{2}$ W, or SWbS by *compass*, with $4\frac{1}{2}$ or 5 fathoms good *strong clay*. With *Southerly winds*, there is in the *East passage* a *heavy swell*, and the *water*, from the *ground* being *uneven*, *breaks* almost the whole way across it in *bad weather*: The *Diomedé* passed through it to the anchorage, before its *dangers* were known, and had not less than 18 feet, but there are *places* where there is *as little* as $1\frac{1}{2}$ fathom and it is very irregular. There is a *bed* of *rocks* to the South of *Gorriti*: the marks for it are,

The Tower of Maldonado	.	.	.	North
and The outer part of Point del Este	.	.	.	ENE $\frac{1}{2}$ E

In the *direct line* of the *entrance* of the Bay, from the *Westward*, is a *bed* of *rocks*, where there are *parts* having only 3, and $\frac{1}{2}$ less than 3 fathoms. The *Bearings* taken on the *rocks* are,

NE Point of Gorriti	.	.	.	E $\frac{1}{2}$ S
NW Point of D ^o.	.	.	.	EbS $\frac{1}{2}$ S
SW Point of D ^o.	.	.	.	SEbS
Point Bellona	.	.	.	WbN $\frac{1}{2}$ N

The Hill of Pan de Azucar just within the *extreme* of Point Bellona.

In *Mid Channel* between these *rocks* and the *Island* is $6\frac{1}{2}$ and 7 fathoms: their *distance* from the *Island* is about

about $\frac{1}{2}$ of a mile. There is 7 fathoms *close* to them *all round* the Western side.

The *watering place* is on the *Main*, close by a *battery*: The *stream* loses itself in the *sand*, except when *swoln* by *heavy rains*, and you have to *roll* your casks about 60 or 80 yards over the *sand*, the *water* is *very good*.

In sailing in, to the *Southward* of the *English Bank*, I should advise keeping as far South as the parallel of $35^{\circ}. 30' S$,^a till you are above the *Bank* and *under* the *meridian* of *Monte Video*.

In sailing from *Monte Video* in the night, you need apprehend no danger steering South *per Compass*, when, probably owing to the *stream* of the *River*, you will make good a true *South course*; you should *not* make any *Easting* till you are in a parallel of $35^{\circ}. 30' S$, or near it.

There is a *bank* of *hard sand*, to the WSW of the *English Bank*, on the *shoalest* part of which is *only* $2\frac{1}{2}$ fathoms, on this the *Spanish Frigate Archimedes* was lost in the year *within* four *hours* after her sailing from *Monte Video*, and *only* a *boat's crew* were *saved*. Its Latitude is $35^{\circ}. 12' S$, and the Mount bears from it, $N 21^{\circ}. 36' W$, of the world.

NB. This I got from Capt. Beaufort. D. P. B.

LATITUDES

^a Capt. *Bouterie's* Chart lays down a *Bank* of $4\frac{1}{2}$ faths. in about $35^{\circ}. 38' S$, and another in about $35^{\circ}. 42'$ with 5 faths. According to the Old Chart, published in 1717, under the auspices of the S^o Sea Company, The *English Bank* is marked with a long slip, extending to the Southward; so that It will not be prudent to sail in by night this way, till carefully examined. *D*

LATITUDES and LONGITUDES.

Light-house of <i>Monte Video</i> ,	34°. 52'. 58" S	56°. 5'. 0" W	The Light-house
Town of . D° .	34. 54. 48 .	56. 2. 15	stands 438 feet above
Point <i>Brava</i> . . .	34. 55. 45 .	56. 0. 0	the level of the River.*
<i>Flores</i>	34. 57. 30 .	55. 44. 30	Variation of the
North Pt. of <i>English Bank</i> ,	35. 8. 30 .	55. 44. 0	Compass off Cape <i>St.</i>
Island of <i>Goritti</i> . . .	34. 56. 15 .	54. 50. 50	<i>Mary's</i> , 13°. 30' E.
<i>Lobos</i>	35. 1. 30 .	54. 45. 30	
Cape <i>St. Mary's</i> . . .	34. 40. 30 .	54. 6. 0	
<i>Great Castillos Rock</i> .	34. 22. 30 .	53. 33. 0	

As It is always desireable to have the Observations of different Persons to compare together, I shall here insert what I have received from two other highly esteemed Friends, Capt. *Peter Heywood* of H. M. Ship *Polyphemus*, and Capt. *Francis Beaufort* of H. M. Ship *Woolwich* : as both the Hon. Capt. *Bouverie* and Capt. *Heywood* give a decided preference in favour of Capt. *Beaufort*, I without hesitation, from their opinion, and my own conviction of his precision, shall adopt his determination (in whole numbers, rejecting *seconds* as *always precarious*, and of *no consequence*), viz.

Monte Video, Light-house, 34°. 53' S Lat.

56. 0 W Long. fr. *Greenwich*.

Capt. *P. Heywood*, in the *Abstract* of his *Journal* which he obligingly favoured me with, in a *Letter*, dated *Polyphemus*, *Portsmouth*, February 1808, says, " From the *Castle of Cape Town*, which I consider to lye in " 18°. 32' E of *Greenwich*, the *two Chronometers* made " to

* Capt. *Heywood* says 451 feet, Capt. *Beaufort* 445, by exact admeasurement; Capt. *Beaufort's*, which I have no doubt is *exact*, is nearly the *mean*.

“ to *James Town, St. Helena*, $24^{\circ}.11'. 0''$ W
 Cape . $18. S2. 0 E$ fr. *Greenwich*
 “ places *St. Helena* . . . $5. S9. 0 W$
 “ and from *St. Helena* to } $50. 34. 15 W$
 Monte Video . . . } ————— . $56^{\circ}.13'.15'' W$

In the same Letter He says, “ Thursday, 29th August, 1807—I accompanied Capt. *Beaufort*, to-day, up to the *Mount Video*, to observe for *Latitude* and *Longitude*; Capt. B. made its *Latitude* $34^{\circ}. 58'. 5'' S$, I observed it in $34^{\circ}. 58'. 12'' S$.* On the summit of this *Mount* is a *Building*, whose *Base* is 42 feet 6 inches by 20 feet, formerly used (as I believe) for a *Light-house*. The *Diameter* of the *Lantern* is 10 feet 6 inches, and its elevation above the level of the Sea 451. We had also some distances of \odot , which gave by Captain *Beaufort's* Observation $55^{\circ}. 48'. 15'' W$, and by mine $55^{\circ}. 49'. 15'' W$.” Capt. *Heywood's* Letter afterwards says, “ Capt. *Beaufort*, by the mean of several distances of \odot taken with a *Sextant*, places it (*Monte Video*) in $56^{\circ}. 1'. 18'' W$, and by some with a *Circle* of \odot $55^{\circ}. 57'. 18'' W$: The mean of all my *Lunar Distances*, on both sides, was $56^{\circ}. 10'. 15'' W$, and those taken by Mr. *Louthean*, the *Master* of the *Polyphemus*, $55^{\circ}. 57'. 41'' W$; The whole making a *Mean* of $56^{\circ}. 1'. 33'' W$.”

Capt. *Heywood* says, “ While we remained off *Monte Video*, the *Mean daily rate* of *Arnold's* *Chronometers* was . . . $N^{\circ} 208$ gaining $4,5$ } on mean time.”
 $N^{\circ} 45$ losing $4,5$ }

“ Taking

* Capt. *Heywood* being $7''$ to the Southward of Capt. *Beaufort*, but this is too small to be considered as a difference; but by Capt. *Beaufort* the difference is only $3''\frac{1}{2}$ *D*

“ Taking my departure from the \rightarrow off *Monte Video*
 “ in Longitude $56^{\circ}. 0' W$ from *Greenwich*, (allowing it
 “ $1\frac{1}{2}$ mile to Eastward of *Monte Video*) the Rates
 “ of the *Chronometers* each 4,5 as above, I carried
 “ on my Longitude all the way to *Spithead*, and at
 “ *Cork* on 27th December 1807, 105 days since we
 “ left *Monte Video*, they made the Longitude as follows,
 “ $N^{\circ} 208, . . . 8^{\circ}. 0'. 30'' W$, and
 “ $N^{\circ} 45, . . . 8. 16. 45 W$,
 “ the Mean . $8. 8. 37 W$, by Sights taken
 “ upon *Spike Island*.”

In a Letter of 17th January, 1808, at *Spithead*,
 Capt. *Heywood* says, “ *Arnold's* $N^{\circ} 208$ and 45 are
 “ above all value, and ought not to have been seperated,^a
 “ because their rates are equal, though one + and the
 “ other - ; and each is differently affected, by the heat
 “ and cold ; so that though they may each on a passage
 “ measure a distance widely different, the mean of them
 “ is always very near the true Longitude. Using one
 “ and the same rate for both since the 14th September,
 “ they are 10' only apart, and we made the Longitude
 “ at *St. Helen's* the day before yesterday (15th January,
 “ or 123 days) $1^{\circ}. 10'$, which I take to be about 6' too
 “ far to the Westward.”

I must here, in Justice to Sir *Thomas B. Thompson*,
 Comptroller of the Navy, observe, that as soon as he
 was made acquainted with this circumstance, He sent
 an

^a In consequence of an Order to send 208 on board H. M. Ship *Surveillante*.



an order to *Portsmouth* to prevent the *seperation* of these *two Chronometers*, but unluckily the *Surveillante* was sailed. I must add, Sir *Thomas* has on all occasions shewn the same attention concerning Chronometers; and very properly suggests the expediency of all Officers, who have Chronometers, being required to keep a daily Register of them at Sea, to be sent to the Hydrographical Office on the Ship's return, when He would be enabled, by the Report made, to give the necessary Directions concerning the *Chronometers*, before they are removed out of the Ship.

I am now to give Capt. *Beaufort's* Observations, which he has obligingly sent me in detail.

“ In the Plan N^o 1, of the *Coasts* adjacent to *Monte Video*, I have not explained the *Data* on which I assumed the *Latitude* and *Longitude* of the *Light-house*.—But, for fear that you should suppose them to have been more accurate, or more numerous, than they really were, I will here transcribe them.

“ By double Mer. Alt. with <i>water horizon</i> , Aug. 24, 1807,				
	on the <i>Light-house</i> of <i>Monte Video</i>	. . . .	34°. 52'. 57"	
“ D°. . . . D°. . . . D°. . . .	Aug. 29,	34. 53. 2		
				Mean . 34. 52. 59. 30
“ D°. with <i>Quicksilver Horizon</i> , by Capt. <i>Heywood</i> ,				34. 52. 56
				Mean Latitude . 34. 52. 58

“ Lunars

" Lunars for Longitude of *Monte Video*.

" Eastern Lutation, Aug. 29, with Sextant on shoar,

1 Set of 5 Observations 55°. 48'. 15"
" D°. . . D°. . . D°. 55. 49. 15

55. 48. 45

" Capt. Heywood D°. (his Sextant) . . 55. 47. 15

55. 48. 15

(should be 55. 48. 0)

" Western Lutation, Sept. 7, on board, reduced to

Light-house, with Sextant, 1 Set 5 Observations, 56°. 7'. 14"

" D°. . . D°. . . D°. 56. 12. 14

" D°. . . Sept. 9, . . . D°. 56. 14. 22

" D°. . . D°. . . D°. 56. 11. 37

" D°. . . D°. . . D°. 56. 12. 52

" D°. . . D°. . . D°. 56. 19. 7

" D°. . . D°. . . D°. 56. 13. 7

" Mean of Western Lutation with Sextant . 56. 12. 56

" Mean of Eastern Lutation with Sextant . 55. 48. 15

" Mean of both Lunations . . . 56. 0. 35

" Western Lutation, 1 Set with *Troughton's* Circle,

observed on board, but reduced to *Light-house*,

Sept. 9 55°. 55'. 52"

" D°. . . D°. . . D°. 55. 56. 22

" D°. . . D°. . . D°. 55. 59. 22

" Mean of 3 Sets with Circle . . . 55. 57. 12

" In meaning these 3 Sets by the Circle, with the

above 10 Sets by the Sextant, I give the latter { 56. 0. 35

double value, from having observations with { 56. 0. 35

it on both sides }

" Mean of the whole—Longitude of *Light-house* of

Monte Video W 55. 59. 27"

(It is worth remarking how very near to the Mean of
the whole, these by the Circle came) therefore

To compleat this View of the various Data for the Longitude of *Monte Video*, I shall add the following comparison of the *Spanish* printed Chart with Capt. *Beaufort*.

	Latitude.	Long. fr. Cadiz + 6°. 17'	Long. fr. Greenw.
<i>Monte Video</i> (il Observatorio)	34°. 54'. 48" S	49°. 57'. 15 W	= 56°. 14'. 15"
The Light-house, by Particular Plan	1. 13 N	3. 20 W	_____
	34. 53. 35 S	50. 0. 35	= 56. 17. 35
By Capt. <i>Beaufort</i> . .	34. 52. 59½	_____	56. 0. 35
	_____		_____
Difference . .	0. 0. 35½		0. 17. 0
	=====		=====
<i>Pan de Azucar</i>	34. 48. 5 S	48. 50. 45	55. 7. 45
By Capt. <i>Beaufort's</i> Chart,	34. 49. 20 S	. . .	54. 39. 35
	_____		_____
By Capt. <i>B.</i>	0. 1. 15 more S	less W	0. 8. 10

which confirms Capt. *Heywood's* Remark, that the distance from *Monte Video* to *Lobos* is 10' too much in the *Spanish* printed Chart.

.....

N.B. In the foregoing Capt. *Heywood* has reckoned the *Castle* at *Cape Good-Hope* Town in 18°. 32' E, which is by *Mason* and *Dixon* only 18°. 22' E
And *James Town, St. Helena*, 5. 39 W which being 5. 49 W

_____ difference 24. 11

Which is the same difference of *Longitude* between the *Cape* and *St. Helena* as Capt. *Heywood* gives.

Capt. *Beaufort*, by several Observations, agreeing well together, at the Dockyard Flag-Staff, concluded the *Latitude* to be 33°. 54'. 40" S
The Mean of 6 Sets *Lunars*, extremes differing 9', *Longitude* 18. 25. 36

B

OBSERVATIONS

OBSERVATIONS by Dr. GORDON, *Physician* of the
Army, commanded by General *Whitelocke*.Received from the Hon. Capt. *Bouverie*.

The *accidents* of the *Field*, the *fatigue* and *hardships* during the *services* before *Monte Video*, and *Buenos Ayres*, together with the *immoderate use* of *ardent spirits*, form the grand causes of the *mortality* which appears on the force of this statement: Very small indeed is the proportion of *deaths* to be ascribed to the *Climate*, for it will be seen by a reference to the Return of Diseases that of 396 deaths, 241 have been occasioned by *Wounds alone*. Every Regiment, however, underwent a *kind of seasoning* to the *vicissitudes* of *temperature*, and the *particular qualities* of the *atmosphere*, of South America, and where *care* was taken by Commanding Officers and Surgeons, this *seasoning* occasioned the *loss* of *very few men*; but where proper attention was *not paid* in the *commencement*, complaints, *mild at first*, laid the foundation of Chronic diseases, often proving *fatal*, or rendering the *man unserviceable*. The *Climate*, however, it must be confessed, is *particularly unfavourable* to the *healing* of *wounds* and *sores* of every description. *Locked-jaw*, and *Mortification* have been frequent among the *Wounded*: and the *smallest scratches* have often run quickly into *high inflammation* and *gangrene*, or produced *extensive* and *dangerous ulceration*: Even *military punishment* has been frequently followed by *Mortification*, almost always attended with *Fever*, *injurious* to the *Constitution*; and men's lives have been endangered in *South America*, by a *degree of punishment*, which in *England*, would be considered *trifling*.

The Doctor adds, that he has had great pleasure in seeing the measure, which he recommended, of having the *Wounded* placed in *Hospital Ships*, attended with
such

such signal success: Experience has proved to the satisfaction of every body, that the *numbers of men*, who have *recovered*, have been greater, than with the *best accommodation* in *Hospitals* on *shoar*. Finally, it is my opinion, that with *good interior æconomy*, and *sufficiency of Cloathing* adapted to the nature of the Climate, *Garrisons* might be maintained at *Buenos Ayres*, and *Monte Video* with *less annual loss by disease*, than in *England*.

General Statement of the numbers of Sick and Wounded of the Forces employed in *South America*, between January and September, 1807.

Average Strength.			Total under Treatment.				Discharged.			Died.		Remaining on the 5th of Sept.							
10,508.			5,531.				4,434.			396.		701.							
	Fevers.		Dysentery.	Diarrhoea.	Pulmonic Aff.	Hypatis.	Visceral Obstr.	Rheumatism.	Paralytic.	Jaundice.	Venereal.	Dropsy.	Ophthalmia.	Wounds.	Tetanus from Wounds.	Ulcers.	Casualties.	Punished.	Total.
	Continued	Intermittent																	
Admitted	599	76	1550	586	87	16	19	148	1	6	82	3	458	1095		218	249	338	5531
Discharged	525	58	1324	567	61	15	15	144	1	4	66	3	264	699		148	228	312	4434
Died . .	35		101		8	1	1				2			198	43	2	5		396
Remaining	39	18	125	19	18		3	4		2	14		194	155		68	16	26	701

It will appear strange to any one, and is a strong confirmation of the *Doctor's* remark about *Hospital Ships*, to find that *one man* ONLY, has died on board this ship [*Medusa*], between September 1806; and September 1807, whose *death* was occasioned by *Mortification* of the *Bowels*. *Dysentery* was *not uncommon* in the *summer months*, and left those that were afflicted with it *very low*. Almost all the *Marines* that were with the army before *Monte Video*, and afterwards employed in the *Hospital Ships* in the *Harbour* were *ill* for * or shortly after their return on board. D. P. B.

H. M. Ship

* Original "for," supposed something wanting. D

1807.

MAY.

H. M. Ship *Polyphemus*, Capt. P. Heywood.

M. 25th. At 3^h. AM. had Soundings in 75 faths. *black mud*, in Lat. $33^{\circ}. 4' S$, $50^{\circ}. 36' W$, or $4^{\circ}. 9' E$ of *Lobos Island**; steering by Compass SbW.

At 4^h. had 75 faths.

At 4^h. 30^m. had 75 faths. but bottom changed to *light greenish mud*, very little coming up with the *lead*.

At 7^h. had 80 faths. having run 21 miles on that course, or *true* SSW, into $33^{\circ}. 23' S$, $50^{\circ}. 46' W$, or $3^{\circ}. 59' E$ of *Lobos*. Soon after deepened to $\dot{1}20$, $\dot{1}40$, and

At Noon in $33^{\circ}. 44' S$, $50^{\circ}. 56' W$, or $3^{\circ}. 49' E$ of *Lobos*, had no bottom. I take this to have been the *SE* part of a *Bank* which is not laid down in any of the Charts I have seen of the Coast: and think it probable it may reach quite to the shoar, and begin somewhere about the Mouth of *Rio Grande*, extending to the *Southward* as far as we had *Soundings* upon it, and, farther in, have little water on it, perhaps.

T. 26th. PM. Moderate Breezes from East to SE; steared SSW and sounded frequently during the night, but had no bottom with from 60 to 100 faths. of line.

At

* By Longitude of *Monte Video* $56^{\circ}. 0' W$ fr. *Greenwich*, *Lobos* $1^{\circ}. 20'. 11'' E$, gives Longitude of *Lobos* $54^{\circ}. 39'. 49'' W$ fr. *Greenwich*; and $4^{\circ}. 9' E$ of *Lobos*, gives $50^{\circ}. 30'. 49'' W$, or $5'. 11''$ more to the Eastward.

1807.

MAY.

(18)

At 7^h. 30^m. altered our Course to WSW, and at $\frac{1}{2}$ past 9, in Lat. 35°. 9' S, 52°. 6' W, or 2°. 37' E* of *Lobos*, sounded in 92 faths. *fine black sandy* bottom, and at

Noon, Lat. 35°. 11' S, 52°. 20' W, or 2°. 25' E of *Lobos*, had 78 faths. *fine black sandy* bottom, with a mixture of mud.

W. 27th. PM. Light Winds from EbN and clear; steared WbS. At 2 had 68 *greenish sandy* bottom. At 5^h. 50 *dark grey sand*, 17' W of Noon Position [2°. 8' E from *Lobos*], and shoalened gradually from 39, at 6, to 29 at Midnight, the Bottom chiefly *fine dark sand* with *small bits of shells*, but some casts had *red* and *white* gravel, and others *grey sand* with *small stones*.

I am laying off the various *Soundings*, which, with a *Chart* shewing our *Track* from the *Isle of Wight*, I shall send you copies of.

At 1^h. AM. the Wind drawing round to the Northward, altered Course to West and WbN.

At day-light saw a Sail SEbS, which afterwards proved to be H. M. Sloop *Saracen*, which had been sent on, before the Convoy, to announce their approach, but had been prevented, by *strong Westerly Winds*, from getting into the *River*.

At 7^h. saw *two Frigates* in the NW.

At

* *Lobos* 54°. 39'. 49" W - 2°. 37' E = 52°. 2'. 49" instead of 52°. 6' or 3" 11" less.

2. 25 = 52. 14. 49 . . . 52. 20 . 5. 11

2. 8 52. 31. 49" *D*

1807.

MAY.

(19)

At 9^h. 40^m. They joined company, being H. M. Ships *Unicorn* and *Medusa*.

At 10^h. AM. In 19 faths. saw the Land about *Cape St. Mary*, bearing NW.

At Noon, in Lat. 35°. 2' S, 0°. 18' E of *Lobos*, had 18 faths. *soft muddy* bottom.

Th. 28th. PM. The Wind unfortunately came round to the *Westward* and *Southward*, with it a strong NE *Current*, of near 3 Knots an hour, as is usually the case at the entrance of the *River Plata*. It came on to blow hard with much sea, which made it quite impracticable to beat the *Transports* up; and as Capt. *Hardyman* and Capt. *Bouverie* seemed to think it more adviseable to come to \rightarrow than to keep under weigh, we made the signal to \rightarrow at $\frac{1}{2}$ past 3, in 16 $\frac{1}{2}$ faths.

The Island *Lobos* bearing . . . S 61°. W, 11 or 12 miles
and *Cape St. Mary* (supposed) . . . N 3°. 30' E, about 5 or 6 miles off *shoar*.

At 4^h. The Wind began to freshen up, and

At 8^h. blew strong at SWbS; *struck topgallant masts*, and veered to *two Cables*.

At 10^h. The Sea rising much.

At Noon *strong breezes* at SWbS and *clear Sky*.
Observed in Lat. 34°. 58' S, and 54°. 34' W.

PM.

1807.

(20)

MAY.

F. 29th. PM. *Strong breezes* from SWbS and *squally*, with a *heavy Sea*, which made many of the *Transports drive* some miles farther from us.

At Noon *more moderate* and *clear*, a Current setting to the NE at the rate of 2½ or 3 Knots. Observed in Lat. 34°. 58'. 20" S, and Long. TK. 54°. 34'. 50" W. The *Wind* continued in the SW Quarter, and sometimes blew very strong, and as the *Current* ran constantly to the *Northward* and *Eastward*, there appeared to be no prospect, with the vile *Pampero*, of gaining any ground by breaking ground with such Vessels as composed our Convoy, here we remained wind-bound; However on

JUNE.

4th. The Weather moderating, and the *Wind* shifting to the *NW*, and the *Current* slackened to less than a *Knot*, therefore

At day-light made the Signal, and

At 9^h. Weighed and stood to the SW on the starboard Tack, and carried from 16 to 8½, 9, 13, and 24 faths.

At Noon,

Lobos bearing W 16°. N, 10 miles,
and *Maldonado* NW

The *Wind* had now backed again to the *Westward*, and was *freshening* up in *Squalls*; *Barometer* 29,77, *Thermometer* 60°.

PM.

1807.

JUNE.

(21)

F. 5th. PM. At $\frac{1}{2}$ past 1^h. wore Ship and Convoy.

At $\frac{1}{2}$ past 4^h. It was somewhat more moderate, but the Weather looked very unsettled; There was *much haze round and near the Horizon*.—As it was *New Moon* to-night, and from the *depression* of the *Mercury* in the *Barometer*, there being every appearance of an *Increase of Wind*, and as many of the *Transports* had already lost \rightarrow s, the Admiral resolved to keep under weigh, and

At 5^h. Tacked and stood to the *Southward* in 24 faths.

At $\frac{1}{2}$ past 6^h. It began to *freshen* up in squalls—*close-reefed* the *Topsails* and *furled* the *Mainsail*; and

At 8^h. *Furled* the *foretopsail*, and sent the *Topgallant Masts* down on deck.

At Midnight, in 30 faths. *fresh Gales* from SW, and a *heavy Sea*.

At day-light all the Convoy was very much dispersed.

At Noon the same Weather. Observed in Latitude $34^{\circ}. 56'$ S, and Longitude $53^{\circ}. 27'$ W, in 22 faths. *ouzy ground* with *small black specks*, and had a *Current* the last 24 hours to N 40° . E, 30 miles.

Sat. 6th. PM. *Strong Gales* and *passing Squalls* from SWbS,
and g At

1807.

JUNE.

(22)

At day-light the Convoy much scattered, the Weather the same.

At Noon, Observed in Latitude $34^{\circ}.47'$ S, and Longitude $52^{\circ}.21'$ W, in 49 faths. water, the Bottom *very fine sand*, nearly approaching to *mud*, *Cape St. Mary* bearing W 4° N, distant 91 miles. Since last Noon had a Set N 34° E 18 miles, The *Barometer* rising 30,16, and Thermometer 53° .

Sund. 7th. PM. *Much more moderate*, SSW Wind.

At 2^h. *deepened* off the *Bank*, and had $\bar{80}$ faths. line.

At Midnight *Light Winds* from SWbS, $\bar{120}$.

At day-light *little Wind* and a *fine clear sky*; swayed up the Topgallant Masts and crossed the Yards, *Out reefs*, wore and stood down towards the leewardmost Ships in the NW.

At Noon Lat. $35^{\circ}.15'$ S. and Long. TK. $51^{\circ}.45'$ W. These 24 hours had a Set S 36° W 11 miles, promising a *shift* of *Wind* in our favour, or shewing that the strong NE *Current* ceases with the *Wind*, or at the *Entrance* of the *Plata* does not extend beyond the *Bank* of *Soundings*. *Barometer* 30,31, Thermometer 59° .

Cape St. Mary, estimated at 125 miles distance, . . N 74° W

The

1807.
JUNE.

(23)

The *Wind* continued from the *Westward*, and we made but little progress, till the

F. 12th. When the Wind hauled round to the NW at times.

Sat. 13th. PM. almost *Calm*.

At 3^h. 30^m. finding the *Current* shifted to the SE, \rightarrow in 6 $\frac{1}{2}$ faths. water, in Lat. 35°. 26' S; in Long. \rightarrow Sights taken, At 3^h. 38^m., 56°. 11' W of *Greenwich*, or 1°. 36'. 12" W of the \rightarrow we had on 28th May to the Eastward of *Lobos*.

PM. Light Winds and foggy.

At 8^h. PM. the Wind came round to the SE, and

Sund. 14th. At day-light, being at ESE, made the Signal and weighed.

At 7^h. 50^m. The *Nereide* was ordered to lead, and as soon as She got sight of the Ships in *Monte Video* Road, to direct the *Convoy* to make the best of their way there, and \rightarrow . The *Flying-Fish* Schooner was sent to keep, and sound, ahead of the *Polyphemus*, at a distance not exceeding 2 miles.

We steared *North* from the \rightarrow about 9 miles, and shoaled from 6 $\frac{1}{2}$ to 4 faths. then hauled up NbE, and after a few more casts of 4 faths. began to deepen our *Water* again, having been for some time rather nearer the

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the *ground* than the *sky*, having many casts of 4 faths. and the Ship drawing 23 feet 8 inches. These *Shoal Soundings* I supposed at the time were on the *Westernmost** *part* of the *Flat* which extends to the ESE from the tail of the *Ortiz Bank*, but on our arrival at *Monte Video* I found that we had just cleared the NW part of a *Shoal* on which the *Diomedé* had been *aground*, but of the *Discovery* and *Existence* of which we had not received any information, nor was it laid down in the *Spanish Chart* I had. This *River* on the whole is *dangerous*, and not calculated for Ships of this Class to be groping about in, blindfold.

At 10^h. 40^m. Saw *Monte Video* bearing NNW, and

At Noon, It bore NWbN, as did the *Ships* at ↗, distant 9 or 10 miles; the depth of water was 6 faths.

M. 15. Afternoon, a *fresh Breeze* from EbS, and *thick rainy weather*.

At $\frac{1}{2}$ past 1^h. ↗ with the small Bower in 6 faths. *soft muddy* bottom, and moored Ship with the B. B. to the *Westward*.

In the Morning took Sights for the *Chronometers*, and made *Long.* by 208 56°. 26'. 30" W
and by 45 55. 57. 45 W
The Mean of both being . 56. 12. 7 W
⌘ Rates

* Westernmost should be Easternmost. *D*

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⌘ Rates from *St. Helena* (Both These *Arnold's*) ; The other two, N° 4260 and N° 3, had been very materially affected by *Change of Temperature* from the day we made *Trinidad*, and both had altered their rates considerably.

The *Look-out-House* on *Monte Video* bore N 24°. 30' W when moored.

A few *Dangers* have already been discovered by some of our Ships, but they have been carelessly laid down by runs ⌘ Log (and hand-bearings taken to $\frac{1}{2}$ or $\frac{1}{4}$ *Points*) on some *Charts of Faden*, and others I have been shewn here. *This Mode* is *incorrect enough any where*, but in a place like *Rio de la Plata*, where there are *no regular Tides*, to make allowance for, but *Currents* the *most uncertain* and *irregular* I ever met with, both as to their *time, rate, and direction, of setting*, one might as well have *nothing* to point the *situation* of a *Danger*.

AUGUST.

M. 10th. Notwithstanding that Circumstances and Events the *most unexpected*, had taken place at *Buenos Ayres*, and compelled the *Military Chief* to promise to evacuate *Monte Video* by 7th September, and to *withdraw* all the *English Troops* from *South America*, seemed to render a more perfect knowledge of the *dangers* in the *River Plata* of less material consequence than it would have been otherwise, yet nevertheless, thinking it may be useful at a future day, and as *some* of the *smaller vessels* of the *Squadron*, about this time, were not particularly

H

wanted,

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wanted, I took the opportunity of suggesting to the *Commander in Chief* the propriety of employing *one* of them, for a few days, in examining the *true situations* and extent of the *English Bank*, and *That* to the *Westward* of *It* on which the *Spanish Ship Archimedes*, and *Diomedes*, had *struck*, and, if possible, to fix the true position of the *Panela Rock*.

As Captain *Beaufort*, of His Majesty's Ship *Woolwich*, was very fortunately here at the time, with his *usual* and *unremitting zeal* to promote the *Public Good*, and benefit *Navigation*, had offered to go on this Service, and being from his *thorough Scientific Knowledge* of his *profession*, *more competent* than *any Officer* in the *River*, to perform such *Service* with correctness and dispatch, I mentioned his offer to The Admiral, who consented to allow him to have the *Protector* Gun-brig for the purpose.

Capt. *Beaufort* will, no doubt, as soon as possible, make known the *Result* of his *Observations*, therefore I shall say nothing more but to express my regret, that his exertions were so circumscribed by *time*, which, with the unfavourable state of the Weather, prevented him from examining *more* than a *part* of *those Banks*. The *true place* of the *Panela Rock* is *yet*, I am sorry to say, *unknown*, though *more* than *one* of *His Majesty's Ships* has *struck upon it* ? and *one Transport* been wrecked !!

29th. I accompanied Capt. *Beaufort* to-day up to *Monte Video*,

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Video, to observe Latitude and Longitude. Capt. B. made its Lat. $34^{\circ}.53'.5''$ S, I observed in $34^{\circ}.53'.12''$ S; we had also some distances of $\odot\epsilon$, which gave, by Capt. B. Long. $55^{\circ}.48'.15''$ W, mine $55^{\circ}.49'.15''$.

On the Summit of this *Mount* is a *Building*, whose *Base* is 42 feet 6 inches by 20 feet, formerly used (as I believe) for a *Light-House*; The diameter of the *Lantern* is 10 feet 6 inches, and Its *Elevation* above the level of the *Sea* 451 feet: From this *Building* we took some *Angles*, and had a very extensive view of the most prominent features of the *Country*, which is level as a Bowling-Green as far as the Eye reached. At the foot of the *Mount* are several runs of excellent *water*, particularly in two small sandy *Bays* on the *South part* of *It*, in one of which, nearest the *Harbour*, we used to fill at with our own *Boats*, in preference to sending *Casks* by the *Transport* up the *River*, who sometimes brought us down very brackish Water, filled at an improper time and place. The *Casks* at these *Watering-Places* must be landed and filled, and hoisted in with a *Triangle* or *Derrick*.

SEPTEMBER.

M. 14th. PM. Light Westerly Winds. At $\frac{1}{2}$ past 1 weighed, and made sail down the *River Plata*. H. M. Ships *Africa*, *Medusa*, and *Daphne*, *Fly Sloop*, *Steady*, *Protector*, and *Encounter* Gun-Brigs, besides 51 *Transports* and 24 *Merchant Vessels* under Convoy. Steared EbS to E $\frac{1}{2}$ N, increasing our depth of Water from 5 to 6 $\frac{1}{2}$ fathoms at 12 o'clock, when the *Island of Flores* bore North

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North 3 or 4 miles. After Midnight, steared EbN, and carried regular increasing Soundings 6½ to 14½, At 8^h. 57^m. AM. when the South Point of the Island of *Lobos* bore E 39°. 30' N, 5 or 6 miles, and the *Two Chronometers* made 1°. 18'. 53" E Longitude from *Monte Video*, placing *Lobos* 1°. 20'. 11" E of It, which is 10'. 4" less than the *Spanish Chart* has it. At Noon Lat. O 35°. 5' 40" S,

<i>Lobos</i> bearing	.	.	.	.	.	W 3°. N
and The <i>Easternmost Land</i> seen off Deck	.	.	.	.	.	N 12. E

the Ship in 15 faths.

During our stay in the *River Plata*, circumstances obliged me to be much on board the Ship, and prevented me from obtaining much knowledge of the *Dangers* which are laid down in the *Spanish Chart*, and of others, said to have been since discovered by some of our own Ships; and had not Captain *Beaufort* arrived, we should still have been unacquainted with the *real situation* of the *Archimedes Bank*, on which the *Diomedé* struck, and of the *North part* of the *English Bank*, where the *Leda* grounded, and till he examined it, was supposed to be a *Bank detached from It*.

According to Capt. *Beaufort*, the *Archimedes Bank* is nearly *three* miles in extent, on an EbS and opposite direction, and with a *high River* has 3½ fathoms water on it; Its *centre* is in Lat. 35°. 12'. 17" South, and bears from *Monte Video* S 21°. 48' E by the *World*.

The

The *Walker*, a *Transport* which was wrecked on the *English Bank*, is in Lat. $35^{\circ}. 15'. 33''$ S, and the *Bank* round her is *nearly dry* at *low River*. There is from $1\frac{1}{2}$ to $3\frac{1}{2}$ fathoms as far as $5'$ to the *Northward* of the *Wreck*, and $\frac{1}{2}$ of a *mile* to the *Westward* of It, there is $4\frac{1}{2}$ and 5 fathoms. The *Wreck* bears from the *Mount* S 36° . E, distant 26 or 27 miles.

From all I could learn, the *Soundings laid down* in the *Spanish Chart* are not very incorrect; I speak, however, from the information of those who had estimated their Ship's place by *Log only*, and which must ever be a means liable to much error, more particularly in a *River* like the *Plata*, where there are *no regular Tides* to allow for, *Currents* uncertain, both as to their Set and Duration, and *variable* as the *Winds*.—Neither are the *Soundings* a *sure guide*, because the *Rise* and *Fall* of the *River* are equally as irregular. On these Accounts it is by no means an easy matter to know so *exactly* a Ship's place, as *should be*, to *lay down Soundings* for the *guidance* of *others*, without the aid of *Chronometers* or other requisite means and Observations. I met with few Persons who had measured the Meridian Distances of Places in the River, but I saw *several Charts* which I understood were *intended* to be *improvements* on the *Spanish one*. Its *Longitude* seemed to have been *adopted* in them *all*, and on a careful examination, in every thing else they appeared to be *bad copies* of it: with the addition of some Ships' Tracks

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laid down by *log run only*, as I was informed and believe.

Whilst we laid at $\downarrow \rightarrow$ off *Monte Video*, The *Water* I believe never *rose* or *fell* more than 5 feet 6 inches, under any Circumstances; though I did hear many marvellous stories of its *rising* and *falling fathoms*, in an *incredibly* short space of time.—It is very true that the *River Plata* has many singularities, and I believe they are *peculiar to it*, but which I think may in great measure be accounted for, from its formation being very different from that of *any other known River* in the Universe. Its *Mouth* being *much wider*, and *shallower*, It is affected by every shift of wind in a very extraordinary manner: so much so, that a *change of wind* may be predicted almost to a certainty by observing very closely the State of the *Mercury* in the *Barometer*, and the *Set* of the *Currents* as they usually *shift before* the *Wind*.—In *calm weather* the *Currents* were generally *very weak*, though *almost* as *regular* as *Tides*, and *ran up* and *down* the *River alternately*.—When the *Wind* was *very variable*, the *Currents* were *equally so*, and I have known the Ship to be *current-rode four different ways* in less than 6 *hours*.—When the Current came in from the *Eastward* along the *North Bank* of the *River*, a *NEasterly Wind* might generally be *expected*, and the *Mercury* at the same time would *fall a little*, if the *Wind had previously* been to the *SE*, but much more if the *transition* was quick from *SW* without stopping in

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in the *SE* Eastern Board. While the Wind continued in the NE Quarter, the *Mercury* was more depressed, speaking comparatively as to its strength, than with any other, and there was *usually* a *Set into the River on that Side*. Indeed whilst the Wind was between NNE and SSE, The *Current* generally ran up to the *Westward*, but did *not rise* the River along its *North Bank*. The Winds between NNE and NW made the River *lowest*; notwithstanding that the *outset* along the North Bank was under those circumstances *very inconsiderable*. Before the setting in of a *SW* Westerly Gale the *Mercury* would fall considerably, but sometimes begin to rise again just *before* the Gale commenced, and *generally mounted* as the Wind *increased*. Before these Winds set in, the Current too always began to run out to the Eastward; and when the Wind was most violent from WSW to South, the Outset was strongest and most constant, and the River much higher than at any other time: seeming to prove that *those* Winds drove in round *Cape St. Anthony* and *Memoria Point* a very large accumulated body of water from the Southward, and which could only find its way out to sea again along the North Bank of the River; and I have no doubt but that when the NE Winds prevailed, and we experienced a current *up* the River *past Monte Video*, there would have been found as strong an *Outset* on the *opposite* side, to the Southward and Eastward.— On these Accounts I should think it best for a ship bound up the *River Plata* to make *Cape St. Mary*, if the Wind should be any where between NNE and SSE,

SSE, because it *may* be *expected* to shift (if it does at all it most probably will) round by *North* to the *Westward*, but perhaps not before *that Wind*, and the *inset together*, would in all likelihood take her up to *Monte Video*.— On the contrary, if the Wind should be to the *Westward* of *North* at the time of making the Land, it may pretty confidently be expected to *shift next* to *West* and *SW*, therefore a Ship should not strive to beat up round *Cape St. Mary* and *Lobos*, past *Maldonado*, and along the *Northern Shoar*, but stand at once over towards *Cape St. Anthony*, where she would most probably find by the time she could stretch across, a *weather shoar* and a *NW Set of Current*, and a *SSW Wind* to run up with between the *Ortiz* and *Chica Banks*; or over to *Monte Video*, passing to the *Westward* of the *Archimedes Bank* in not less than 5 or 5½ fathoms water.

I am inclined to think, that the strong *NEasterly Currents* which are to be met with in *Soundings* off the *River's Mouth*, when the Wind is about to blow, or blowing from the *SWestward*, do not extend much, if at all, beyond the *Bank of Soundings*. From *Cape St. Mary* this *Bank* lyes off about 95 or 100 miles, and from 92 fathoms fine *dark sandy* bottom on the edge of it, and nearly in the Parallel of the *Island Lobos*, the *Soundings* gradually, though *not regularly*, decrease over a bottom of various quality to 17 and 15 fathoms within 5 or 6 miles of it. Down to the *Southward* the Water is *much deeper*, and between the Parallels *S6°*. and *S7°*. S, and
on

on, or near about, the *Meridian* of *Lobos*, there are from 16 to 45 fathoms, and the bottom is generally *dark sand* like *beaten pepper*.

From the Accounts I had heard, I was led to expect we should have had *very heavy rains*, *frequent fogs*, and *violent SW Winds*, as the time of our arrival in the *River* was the *Beginning* of their *Winter*, but we had *no very heavy rains*.—We had but *Showers*, now and then, of short duration, the Weather was *seldom foggy*, and we rode out the heaviest *Pampero* we experienced with only half a Cable more than usual on the Weather \rightarrow , the Yards braced by, and the Top-masts an end.—It was however said to be considered by the *Spaniards* as a *Winter* much more remarkable for its mildness than any they had known for many years.

There is a peculiarity in the *Air* of this part of *South America* which retards putrefaction.—It absorbs the Moisture of the innumerable dead *Carcasses* which lie on the ground in all directions, so that (while it does not rain) without acquiring so offensive a smell as elsewhere, they dry up and *wither away*. Yet notwithstanding this *Purity* of the *Air*, there is, perhaps, no part of the World, where *flesh wounds* (however slight) are more dangerous and fatal to Mankind; and where the *locked-jaw* is so frequently the occasion of *death*: This, however, I should be inclined to attribute rather to the *State* of the *Blood* of Patients in this Country, than to

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any atmospheric Cause, owing to the great quantity of Animal Food they eat.^a

The *Climate* on the whole, during the short period I had opportunity to judge of it, may be called a *good one*, for *Persons* of *good sound Constitutions*, but for *People* of *delicate Habits*, the *Changes* of *Temperature* are rather too frequent and sudden sometimes, though the *Thermometer* never fell *below* 48°. nor rose *above* 64°. And the *Mean Height* of *Mercury* was 55°. or 56°. yet it sometimes changed very quickly, when the Wind *shifted suddenly* from the Northward round to SW.

^a Capt. Patrick tells me they eat no Vegetables of any kind. *D*

Winds

Winds and Weather at Buenos-Ayres in 1805,

by Don Pedro Antonio Cerviño,

from 18th January to 31st December.

Buenos-Ayres, Latitude $34^{\circ} . 36' . 43''$ S, Longitude $52^{\circ} . 5' . 22''\frac{1}{2}$ West from Royal Observatory of the Island *Leon* = $58^{\circ} . 22' . 7''$ West of Greenwich, is $\frac{10}{10}$ $\frac{5}{5}$ ^{toises. feet.} above the usual Level of *Rio de la Plata*; It is built on a *Plain* which extends more than 200 leagues; *Winds* are frequent, and, perhaps, there are not 8 days of absolute *Calm* in the whole Year; the SW, NW and SE blow strong: The SW brings *fine Weather*; but the NW and SE are tempestuous: with the NW comes *Thunder* and *some Lightning* (algunos Rayos). There being *no Wood* nor *Hills*, The Country lyes entirely open to all Weather.

This Year 1805 was remarkable for an uncommon *Ebb* of the *River*; The *Waters* of which retired to a great distance from the *Banks* on 2d June, Wind NW; (This had happened some years before); It also occurred in the Month of September, 1806, when the *Sand* was left *dry* for $1\frac{1}{2}$ or 2 miles.

On the 5th and 6th June, 1805, was a *terrible Storm*, and the *Wind* blew so strong from the SE, that It caused an extraordinary *Rise* of the *River*; many *Houses* were destroyed by it, and more than 30 Vessels were driven on *shoar*, many as far up as 1500 yards.

The Damage done (by the *Storm* of 6th June, 1805, the *Fury* of which was during 5 Hours of the 6th) in this *Port* and at *that* of *Conchas* is calculated at about 800,000 Dollars.

Storms are not unfrequent in this Climate.

1803.	Clear days.	Cloudy days.	Rainy days.	on what days rain.	Thunder & Lightning.	on what days.	North	Winds . . . and number of days.						Prev Wind		
								NE	East	SE	South	SW	West	NW		
January	8	5	3	18, 29, 30	. . 2 days	18, 30, . . .	. . . 1	2½	5	. 1	4½	. . .	. . .	. . .	S
Feb ^y .	13	15	4	3, 9, 23, 24	. 1 .	9	4 . 3 .	9	4½	4	3½	. . .	. . .	. . .	I
March	12	19	10	{ 1, 8, 13, 14, 19, 22, 23, 25, 28, } 29	4 ^a . { 3, 8, 13, 14, } 23	6½ . 3½ .	13½ . 4	. . .	3½	. . .	. . .	. . .	. . .	. . .	E
April	9	21	5	7, 11, 17, 21, 22	2 .	21, 22. . .	13 . 1 .	6	2	2	3	1½	1½	. . .	I	
May	10	21	7	{ 3, 4, 12, 13, 20, } 29, 30 . . . .	. . . . .	. . . . .	12 . 2 .	2	1½	1	9½	2	1	. . .	I
June	13	17	10	{ 3, 4, 5, 6, 7, 8, } 20, 21, 23, 24 }	3 .	20, 21, 24 .	9½ . 2 .	2½	4½	1½	4	2	4	. . .		
July	8	23	10	{ 1, 2, 3, 4, 6, 7, } 10, 23, 29, 31 }	1 .	1	11½ . 1½ .	6	2½	2½	7	. . .	. . .	. . .
August	12	19	7	{ 1, 2, 9, 15, 19, } 28, 29 . . . .	. . . . .	. . . . .	9½ . 2 .	5	½	. . .	9½	1½	3	. . .	{
Septem.	10	20	9	{ 3, 4, 5, 15, 16, } 17, 23, 24, 28 }	3 . { 4, 23, 24; } 24 th hailed A.M. }	7 . 5½ .	2½ . 3	5	4	1	. . .	. . .	. . .	. . .
October	7	24	13	{ 9, 11, 14, 16, 17, } 18, 19, 22, 23, } 27, 28, 29, 30 }	3 .	11, 16, 17 .	7 . 4 .	8	7	2	3	. . .	. . .	. . .	I
Novemb.	2	28	9	{ 4, 8, 10, 11, 21, } 25, 27, 28, 30 }	2 .	11, 20. . .	6½ . . .	9	7	1	4	1½	1	. . .		
Decem.	12	19	^b 11	{ 9, 10, 11, 12, 21, } 22, 24, 28, 30, } 31	2 .	16, 19. . .	5½ . 4 .	3½	6½	2	6½	½	2½	. . .	SI	
<hr/>																
114 ^c 231 98							23	Recapitulation	92	29½	69½	50 ^d	22	62	10	13 .

^a So in the Original, but by the dates, it should be 5. } *D*

^b D°. d°. d°. 10. }

^c D°. but by particulars should be 116.

^d By particulars, only 48; but to make out 365 days for the year, it is 50. *D*

FINIS.

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